

WHAT IS CLAIMED IS:

1. A policy control device for reflecting a policy rule defined by a condition and an action corresponding to the condition for operation setting of respective network devices present in a network to be managed, according to a transition of operation states of the network, comprising:

a storage unit for storing a plurality of multi-policy rules generated in units of combination of at least two single policy rules having different actions on the same condition, together with particular information of a network device to be applied, in such a manner that the plurality of multi-policy rules and the particular information can be updated; and

a control unit for applying one of the plurality of multi-policy rules stored in the storage unit for the operation setting of the network device identified, based on the particular information.

2. A policy control device for reflecting a policy rule defined by a condition and an action corresponding to the condition for operation setting of respective network devices present in a network to be managed, according to a transition of operation states of the network, comprising:

a storage unit for storing a plurality of single policy rules having different actions on the same condition, together with particular information of a network device to be applied and application priority information, in such a manner that the plurality of single policy rules, the particular information,

and the application priority information can be updated; and

a control unit for applying one of the plurality of single policy rules stored in the storage unit for the operation setting of the network device identified, based on the particular
5 information according to an order of priority, based on the priority information.

3. A policy control device according to claim 1, wherein:

the condition contains at least one selected from among
10 a line trouble, an excess of a traffic amount threshold value, and an excess of a packet loss threshold value each indicating operation states of the network to be managed; and

the action contains at least two selected from among switching of a traffic flow path, flow control for suppressing
15 traffic, and a notification to a network operator.

4. A policy control device according to claim 1, wherein the particular information of the network device to be applied contains identification information of the network device and
20 identification information of a line interface.

5. A policy control device according to claim 1, wherein each of the plurality of multi-policy rules is generated in units of combination of at least two of the single policy rules having
25 the different actions on the same condition preregistered in the storage unit, to enable hierarchical management of the plurality of multi-policy rules.

6. A policy control device according to claim 1, wherein:

the storage unit further stores application priority information of the plurality of multi-policy rules in such a manner that the application priority information can be updated;
5 and

the control unit applies one of the plurality of multi-policy rules for the operation setting of the network device, according to an order of priority based on the priority
10 information.

7. A policy control device according to claim 1, wherein:

the storage unit further stores application priority information of the single policy rules in each of the plurality of multi-policy rules in such a manner that the application
15 priority information can be updated; and

the control unit applies the single policy rules in each of the plurality of multi-policy rules for the operation setting of the network device, according to an order of priority based
20 on the priority information.

8. A policy control method for reflecting a policy rule defined by a condition and an action corresponding to the condition for operation setting of respective network devices
25 present in a network to be managed, according to a transition of operation states of the network, comprising:

storing a plurality of multi-policy rules generated in

units of combination of at least two single policy rules having different actions on the same condition, together with particular information of a network device to be applied, in such a manner that the plurality of multi-policy rules and the particular
5 information can be updated; and

applying one of the plurality of multi-policy rules stored for the operation setting of the network device identified, based on the particular information.

10 9. A policy control method for reflecting a policy rule defined by a condition and an action corresponding to the condition for operation setting of respective network devices present in a network to be managed, according to a transition of operation states of the network, comprising:

15 storing a plurality of single policy rules having different actions on the same condition, together with particular information of a network device to be applied and application priority information, in such a manner that the plurality of single policy rules, the particular information, and the
20 application priority information can be updated; and

applying one of the plurality of single policy rules stored for the operation setting of the network device identified, based on the particular information according to an order of priority based on the priority information.

25 10. A policy control method according to claim 8, wherein:
the condition contains at least one selected from among

a line trouble, an excess of a traffic amount threshold value, and an excess of a packet loss threshold value each indicating operation states of the network to be managed; and

the action contains at least two selected from among
5 switching of a traffic flow path, flow control for suppressing traffic, and a notification to a network operator.

11. A policy control method according to claim 8, wherein the particular information of the network device to be applied
10 contains identification information of the network device and identification information of a line interface.

12. A policy control method according to claim 8, wherein each of the plurality of multi-policy rules is generated in units
15 of combination of at least two of the single policy rules having the different actions on the same condition preregistered, to enable hierarchical management of the plurality of multi-policy rules.

20 13. A policy control method according to claim 8, further comprising:

storing application priority information of the plurality of multi-policy rules in such a manner that the application priority information can be updated; and

25 applying one of the plurality of multi-policy rules for the operation setting of the network device, according to an order of priority based on the priority information.

14. A policy control method according to claim 8, further comprising:

5 storing application priority information of the single policy rules in each of the plurality of multi-policy rules in such a manner that the application priority information can be updated; and

10 applying the single policy rules in each of the plurality of multi-policy rules for the operation setting of the network device, according to an order of priority based on the priority information.